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INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, in Charge

The principal activities of this division in the field for the month of February have been concerned with investigations of cattle grubs. R. W. Wells left Washington February 8 for Galesburg, Ill., to make observations near there on seasonal abundance and stages of development of the cattle grubs.

W. G. Bruce, assigned to the Fargo, N. D., field laboratory, arrived there February 13 and took up his duties. The district, in the Red River Valley of the North, where this laboratory is located is free from cattle grubs, although grubby cattle have on various occasions been shipped in. Mr. Bruce's problem is to determine what the factors are which apparently prevent the establishment of Hypoderma there, and his work is being done in cooperation with the North Dakota Agricultural College. Prof. J. A. Munro, of the Department of Entomology, Prof. J. E. Chapman, Department of Agronomy, Dr. A. F. Schalk, Department of Veterinary Science, and Prof. J. H. Shepperd, Department of Animal Husbandry, and others, of the staff of the North Dakota Agricultural Experiment Station, have shown great interest in the problem.

H. S. Peters left Dallas, Tex., February 3 by automobile for Terre Haute, Ind., and arrived there February 7, after making observations on cattle grubs en route. After making stops in Columbus, Ohio, and Pittsburgh, Pa., he returned on February 17 to the field laboratory at Beltsville, Md., to which he is now assigned.

F. C. Bishopp left Washington February 8 to make observations at various points on cattle grubs and to supervise the work of assistants in the field. His first stop was Terre Haute, Ind.; from there he drove overland to Galesburg, Ill., stopping en route at Urbana on February 11 for a conference with Doctors Flint, Metcalf, and Graham, of the staff of the Illinois Agricultural Experiment Station. On this date, at the request of Dr. Graham, he gave a talk before the Illinois Veterinary Conference, which was in session. Other points visited by him were St. Paul, Minn., Fargo, N. D., and Lamar, Colo. At the place last named conferences were held with officials of the Bureau of Animal Industry who are conducting there an experiment in control of the cattle grub. Mr. Bishopp returned to Washington February 22.

Dr. L. O. Howard addressed the New Jersey Mosquito Extermination Association at Atlantic City, N. J., February 13, presenting his annual summary of world-wide mosquito work.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, in Charge

George H. Rea, who was formerly a special field agent of the Bee Culture Laboratory, recently stopped at the laboratory on his way to New Bern, N. C., where he intends to engage on an extensive scale in queen rearing and the production of package colonies of bees.

Prof. L. M. Bertholf, of Western Maryland College, Westminster, who has been engaged in research at the Bee Culture Laboratory for several recent summers, stopped at the laboratory on February 23 to complete some work relating to a number of manuscripts which he is preparing for publication. While in Washington Professor Bertholf also consulted with members of the scientific staff of the Bureau of Standards about his work dealing with the response of honeybees to light of various wave lengths, which he expects to resume at the Bee Culture Laboratory in the coming summer.

Jas. I. Hambleton attended the meeting of the Southern States Beekeeping Conference held at Baton Rouge, La., February 7, 8, and 9, where he discussed the package-bee and queen-rearing industry. The meetings were held in Agricultural Hall of the University of Louisiana, where the Southern States Bee Culture Field Station of the bureau is located. It was one of the best meetings ever held by the Southern Conference, and beekeeping representatives from most of the Southern States, as well as from a few of the Northern States, were in attendance. One of the principal aims of the Conference was to bring about, if possible, the standardization of packages of bees. In order to expedite the establishment of standards the conference voted unanimously to leave the matter entirely in the hands of Doctor Whitcomb and Doctor Oertel, of the Southern States Bee Culture Field Station, who, after consulting with shippers and buyers of packages of bees, are to draw up specifications which will be submitted to the trade for approval before being recommended as standard.

Mr. Hambleton also visited the bureau's Gulf Coast Laboratory, at New Orleans, La., and the Texas Apicultural Laboratory, located about 15 miles from San Antonio, where he discussed with H. B. Parks, the director of the laboratory, various matters pertaining to beekeeping in the South, particularly matters relating to honey-plant surveys. Mr. Parks has made a very comprehensive study of the honey flora of Texas, and is considered the outstanding authority on honey plants in the Southern States.

On the same trip Mr. Hambleton stopped at the Intermountain Bee Culture Field Station, at Laramie, Wyo., and discussed the experimental work to be done there for the coming season. He spent a day at the Colorado State Agricultural College, at Fort Collins, where problems in beekeeping of the Intermountain States were discussed with Professor Richmond. The Intermountain Bee Culture Laboratory has an experimental apiary located just outside of Fort Collins, which was visited en route.

W. J. Nolan attended the meeting of the American Honey Institute on February 6, and the convention of the American Honey Producers' League on February 7, 8, and 9. Both were held in Sioux City, Iowa. The meetings of these two organizations constituted one of the best and most important gatherings of beekeepers held in this country in recent years. The attendance, which came from 19 States, taxed the hotel accommodations. A sudden spell of cold weather, however, kept away many beekeepers who were within driving distance. There were present representatives of many State beekeepers' associations, and most of the large marketing organizations, such as the Mountain States Honey Producers' Association, the Colorado Honey Producers' Association, and the recently organized Preserves and Honey, Inc. The latter is a $5,000,000 organization for the marketing of honey and for the promotion of various commercial interests, including the American Railway Express Company and the Kellogg Company, commercial bottlers of honey, and manufacturers of beekeepers' supplies and of tin and glass containers.

The American Honey Institute was organized in March, 1928, by the united efforts of honey bottlers and manufacturers of beekeepers' supplies, for the dissemination of information regarding honey, in order to increase its consumption as a food by itself, and the demand for it in baking and in the trade, and also to obtain information as to its value in the diet and otherwise. Membership in the Institute is now open to all, whether individuals or organizations, who are interested in the aims here set forth.

The convention of the American Honey Producers' League was given over to general and business sessions. Talks were given on important questions having to do with honey and its marketing, inspection work, and work in special research. Mr. Nolan addressed the convention on results obtained at the Bee Culture Laboratory confirming Doctor Watson's method for the artificial insemination of queenbees, and also on conditions relating to the exportation of honey from the United States. At one of the evening sessions a talk on the uses of honey was given by Dr. H. E. Barnard, president of the American Honey Institute, which was broadcast. The Bureau of Agricultural Economics sent its market-news specialist on honey, H. J. Clay, to attend the convention. The State bee inspectors present created a new organization to be known as the Association of Apiary Inspectors of America, the object of which is to further uniform practice in apiary inspection.

TROPICAL, SUBTROPICAL, AND ORNAMENTAL PLANT INSECT INVESTIGATIONS

A. C. Baker, in Charge

Appearing on the Program of the Central California Citrus School, held at Portersville, Calif., E. A. McGregor spoke February 8th on the subject "The Latest Word in Citrus Thrips Control." About 200 growers attended this meeting.

STORED-PRODUCT INSECT INVESTIGATIONS

E. A. Back, in Charge

The Modesto, Calif., News-Herald for January 11 and 12 carried several interesting accounts regarding control of the bean weevil in Stanislaus, Merced, and San Joaquin Counties, and featured illustrations furnished by A. O. Larson and C. K. Fisher. Fifty ranchers residing in Merced County met at Hilmar on January 14 and unanimously passed a resolution favoring the adoption of a county ordinance providing for the destruction of sources, in storage, of development of the bean weevil. Thanks to the hearty support given by State and county agricultural agents, the principal bean growers of this district are solidly behind the movement to control bean weevils. A resolution was proposed the object of which was to retain in this district the services of Messrs. Larson and Fisher.

Perez Simmons and W. D. Reed attended the 21st annual meeting of the Dried Fruit Association of California, held January 10 to 12 at Del Monte, Calif. Mr. Simmons read a paper entitled "Pest Control News."

Perez Simmons inaugurated on February 7 a periodical exchange for 1929 among the laboratories of the bureau on the Pacific Coast. Fourteen laboratories are cooperating in the exchange, which includes 441 numbers of 33 periodicals, mostly dealing with entomology or closely related subjects. Among the publications thus made available to each worker are Biological Abstracts, Quarterly Review of Biology, Review of Applied Entomology, and Science News Letter. Those entering magazines in the exchange are Messrs. Blanchard, Campbell, Cole, Doucette, Elmore, Keen, Lane, Larson, McGregor, Newcomer, Rockwood, Shirck, and Simmons.

Visitors to the Dried Fruit Laboratory at Fresno in February numbered 25, and included Professor W. C. O'Kane, Messrs. G. J. Morton, E. B. Russell, and W. C. Taber, of the San Francisco office of the Food, Drug and Insecticide Administration, Professors Ralph E. Smith, H. N. Hansen, and I. J. Condit, of the University of California, E. P. Roleson, chemist, California Packing Corporation, and C. E. Scott, Office of Plant Pathology, California State Department of Agriculture.

On February 21 Dr. Back gave an informal talk on control of fabric pests at the National Institute of Cleaners and Dyers, at Silver Spring, Md. Men attend this institute from all parts of the country, many being sent at the expense of the firms by which they are employed.

On January 7, at the request of a large dried-fruit packing house, W. D. Reed was in San Francisco to attend a demonstration of a new experiment for vacuum fumigation, estimated to have cost $20,000. D. B. Mackie, of the California State Department of Agriculture, who is a collaborator of the bureau, and also a representative of business firms, was present.

On January 15 to 18 W. D. Reed tested the new fumigating chamber constructed in the San Jose plant of the California Packing Corporation. Liquid hydrocyanic acid, ethylene oxide, and a proprietary fumigant were used.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, in Charge

On February 19, at Spokane, Wash., E. J. Newcomer, in charge of the field laboratory at Yakima, Wash., for investigations of the codling moth, met with representatives of the Washington Experiment Station and the Washington State Department of Agriculture to formulate recommendations for State control of the codling moth in 1929.

T. L. Bissell, until recently of the pecan-insect field laboratory at Barnesville, Ga., which has been discontinued, is now in immediate charge of pecan-insect investigations at Experiment, Ga., where laboratory facilities have been provided by the Georgia Agricultural Experiment Station.

G. F. Moznette, in charge of pecan-insect investigations, attended the meetings of the Cotton States Branch of the American Association of Economic Entomologists held at Houston, Tex., February 6 and 7, where he presented a paper on "Airplane dusting experiments, and results secured for the control of the pecan leaf case-bearer." Others present from the Division of Deciduous-Fruit Insects were O. I. Snapp, of the field laboratory at Fort Valley, Ga., and C. C. Pinkney, of that at Brownwood, Tex. Mr. Snapp was elected secretary-treasurer, and B. R. Coad, in charge of the Division of Cotton Insects, chairman, of the Cotton States Branch. After the meetings Mr. Moznette visited the field laboratory at Brownwood, and that at Shreveport, La., and conferred with various men who are working on pecan insects. Mr. Snapp, with several State entomologists, made a trip into the lower Rio Grande Valley of Texas to observe some of the work being done on the Mexican fruit worm and in inspection at points on the Mexican border.

Contributions from the Japanese-Beetle Laboratory

Arthur Gibson, Dominion Entomologist, and Frank A. Herman, Assistant Chemist, both of Ottawa, Canada, visited the Laboratory on February 15. Other visitors were C. W. Collins, in charge of gipsy-moth research, Gipsy-Moth Laboratory, Melrose Highlands, Mass., on February 21, C. H. Popenoe, of the Division of Truck-Crop Insects, U. S. Bureau of Entomology, Washington, on February 27, and on other dates Prof. Clyde C. Hamilton, Entomologist, of Rutgers University, and R. Bourdette, of the New Jersey State Experiment Station.

V. I. Safro, Director of Japanese Beetle Suppression for the New Jersey Department of Agriculture, has resigned his position to enter commercial work with the Kay Laboratories, West Nyack, N. Y.

R. J. Sim visited the New York State Museum at Albany on February 18 and 19, and the American Museum of Natural History in New York City on February 20, 21, and 22, to study types of Phyllophaga.

TAXONOMIC INVESTIGATIONS

Harold Morrison, in Charge

George H. Harrington, an oil geologist associated with the Standard Oil Company, and who for several years was located in northwestern Argentina, recently called at the National Museum and donated to it a large number of Argentinian and Bolivian beetles which he had collected during the past decade. Many of these were taken by him in the course of geological investigations along the Rio Beni, and consequently are an important supplement to the collection of beetles from the same region made by Dr. W. M. Mann on the Mulford Biological Expedition in 1921 and 1922.

A. B. Gahan has recently been the recipient of two important shipments of the C. F. Baker collection, including specimens that had been sent by Professor Baker to specialists for study. Dr. G. Grandi, Instituto di Zoologia, R. Universita, Bologna, Italy, sent a number of specimens of fig insects, among which are several types of new species described by him. Dr. L. Masi, Museo Civico di Storia Naturale, Genoa, Italy, returned a portion of the material of the family Chalcididae. Several types of Dr. Masi's new species were included in this consignment.

Late in February J. C. Elmore, of the Garden Grove, Calif., field laboratory of Truck Crop Insect Investigations, consulted with Dr. A. G. Böving and Mr. H. S. Barber regarding some of the descriptions of the stages of species which he is considering in his manuscript on the pepper weevil, Anthonomus eugenii.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, in Charge

The following members of the division attended the meetings of the North Central States Entomologists at East Lansing, Mich., on February 28 and March 1: W. H. Larrimer, D. J. Caffrey, C. M. Packard, George I. Reeves, Philip Luginbill, F. L. Simanton, W. A. Baker, F. F. Dicke, C. H. Batchelder, W. B. Noble, and Curtis Benton.

Sessions of the Annual Research Conference of Corn Borer Insecticide Investigators, of which C. H. Batchelder is chairman, were held on February 27 and 28, in connection with these meetings.

George W. Still has accepted a transfer from Arlington, Mass., to Sandusky, Ohio.

Gilbert T. Bottger and John L. Breitwieser have been appointed Junior Entomologists, for duty at Monroe, Mich., and Arlington, Mass., respectively.

FOREST-INSECT INVESTIGATIONS

F. C. Craighead, in Charge

Dr. T. E. Snyder sailed from New York February 5 for a trip to Panama, where he will go over his experiments with tropical termites. Dr. Snyder is running a large and important series of tests of various treatments designed to protect woods in the tropics from infestation by termites. The tests are being conducted on Barro Colorado Island, Canal Zone.

William Middleton attended the National Shade Tree Conference held at the Brooklyn Botanical Gardens, Brooklyn, N. Y., February 7 and 8. This was the fifth of such conferences, and the second following permanent organization. It was very well attended by scientists and commercial shade-tree men. A. F. Burgess, formerly of the bureau, and now with the Plant Quarantine and Control Administration, was elected vice-president for the year. Many interesting papers were presented, covering the subjects of case records, callus healing, aeration of tree roots, tree injection, oil-spray problems, fertilization of trees, and a series of papers on both insect pests of trees and fungus growths of trees. H. J. MacAloney prepared a paper on the white pine weevil as a pest of shade trees for presentation at the conference.

C. W. Collins, of the Gipsy-Moth Laboratory, was in Washington February 18 to 21 to confer with Dr. Craighead, and with Doctors Marlatt and Quaintance and Mr. Graf, regarding the work of the Laboratory. After leaving Washington he made a short visit to the Japanese Beetle Laboratory.

P. D. Sanders, of the Department of Entomology of the University of Maryland, visited the Gipsy-Moth Laboratory on February 6.

INSECT PEST SURVEY

J. A. Hyslop, in Charge

In February J. A. Hyslop visited the colleges of agriculture of Minnesota, Illinois, Indiana, and Ohio, to study methods of making the insect-pest survey now in vogue at these stations, and in particular the long-established Natural History Survey of Illinois.

State insect pest surveys will be organized this year in Minnesota and Ohio, and it is hoped that other States will soon establish similar work.

TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, in Charge.

K. L. Cockerham, Biloxi, Miss., attended the meetings of the Cotton States Entomologists Branch of the American Association of Economic Entomologists, at Houston, Tex., February 6 and 7. Afterwards, in company with Tom O'Neill, Assistant Entomologist for Texas, he made a brief survey of conditions relating to the sweet potato weevil in eastern Texas.

W. H. White, Washington, D. C., and N. F. Howard, Columbus, Ohio, visited Norfolk, Va., February 5, where the cooperative work on the Mexican bean beetle for the coming season was discussed with the workers of the Virginia Truck Experiment Station. Dr. Howard returned to Columbus February 8.

J. C. Elmore, Garden Grove, Calif., arrived in Washington February 18 for conference on the project relating to the pepper weevil, and for library work concerning a manuscript on his investigations on the pepper weevil in California. En route he visited bureau laboratories at New Orleans, La., on February 13, and at Gulfport and Biloxi, Miss., on February 15 and 16.

J. R. Douglass, in charge of the field laboratory at Estancia, N. M., is visiting the Mexican bean beetle laboratory at Columbus, Ohio, to check results of work on the Mexican bean beetle at Estancia and to make arrangements for future work.

C. H. Popenoe, Sligo, Md., visited the Japanese Beetle Laboratory at Moorestown, N. J., February 27 and 28.

N. F. Howard and R. Cecil, Columbus, Ohio, attended the meetings of the North Central States Entomologists at East Lansing, Mich., February 28 and March 1 and 2.

Probationary appointments as Junior Entomologists have been given D. E. Fox, assigned to duty at Twin Falls, Idaho, effective February 1, and C. W. Getzendaner, assigned to duty at Puyallup, Wash., effective February 16.

D. M. DeLong, Professor of Entomology, Ohio State University, has been appointed a collaborator, effective February 1.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Die Bekämpfung von Forstschädlingen mit Borchers "Hercynia"--Kalkarsenat. 16 p., 15 pl. Gosler, Gebr. Borchers, Aktiengesellschaft, 1929.

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Insects of Samoa, and other Samoan terrestrial Arthropoda. Part I, fasc. 1, part II, fasc. 2, part III, fasc. 3, part IV, fasc. 2, part V, fasc. 1, part VI, fasc. 2, part VII, fasc. 2, 3. London, printed by order of the trustees of the British Museum, 1928. Contents: Pt. I, Orthoptera and Dermaptera; fasc. 1, p. 1-8, Dermaptera, by Alfred Borelli; Pt. II, Hemiptera; fasc. 2, p. 47-80, Cercopidae, by V. Lallemand; Cicadidae, by J. G. Myers; Aquatic and semi-aquatic Heteroptera, by Teiso Esaki. Pt. III, Lepidoptera; fasc. 3, p. 117-168, Geometridae, by Louis B. Prout. Pt. IV, Coleoptera, fasc. 2, p. 67-174, Heteromera, Bostrychoidea, Malacodermata, and Buprestidae, by G. K. Blair; Elateridae, by R. H. Van Zwaluwenberg; Melasidae (Eucnemidae), by E. Fleutiaux; Cerambycidae, by Chr. Aurivillius; Brenthidae, by E. Kleine; Anthribidae, by Karl Jordan; Proteorhinidae, by R. C. L. Perkins. Pt. V, Hymenoptera, fasc. 1, p. 1-58, Apoidea, Sphecoidea, and Vespoidea, by R. C. L. Perkins and L. Evelyn Cheesman; Larridae, by Francis X. Williams; Formicidae, by F. Santschi. Pt. VI, Diptera, fasc. 2, p. 23-108, Nematocera, by F. W. Edwards; Cecidomyiinae, by H. F. Barnes. Pt. VII, Other orders of insects, fasc. 2, p. 45-76; Plecoptera, by R. J. Tillyard and J. A. Lestage; Siphonaptera, by P. A. Buxton; Thysanoptera, by Richard S. Bagnall; fasc. 3, p. 77-116, Mallophaga, by J. Waterston; Anoplura, by P-A. Buxton; Trichoptera, by Martin E. Mosely; Neuroptera, by P. Esben-Petersen; Apterygota, by George H. Carpenter.

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Die Tierwelt Mitteleuropas. Bd. 3, Lfg. 4, Spinnentiere. Illus. Leipzig, Quelle u. Meyer, 1928. Contents: Wassermilben, Hydracarina, by Karl Viets, pt. viii, 57 p.; Formenkreis--Hornmilben, Oribatei, by Max Sellnick, pt. ix, 42 p.; Formenkreis--Zecken, Ixodoidea, by Paul Schulze, pt. x, 10 p.

Buxton, P. A.
Researches in Polynesia and Melanesia. An account of investigations in Samoa, Tonga, The Ellice group, and the New Hebrides, in 1924, 1925. Parts V-VII (Relating to human diseases and welfare). 139 p., illus., pls. (London School of Hygiene and Tropical Medicine Memoir, Series 2). London, 1928. (References, p. 133-135.)

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